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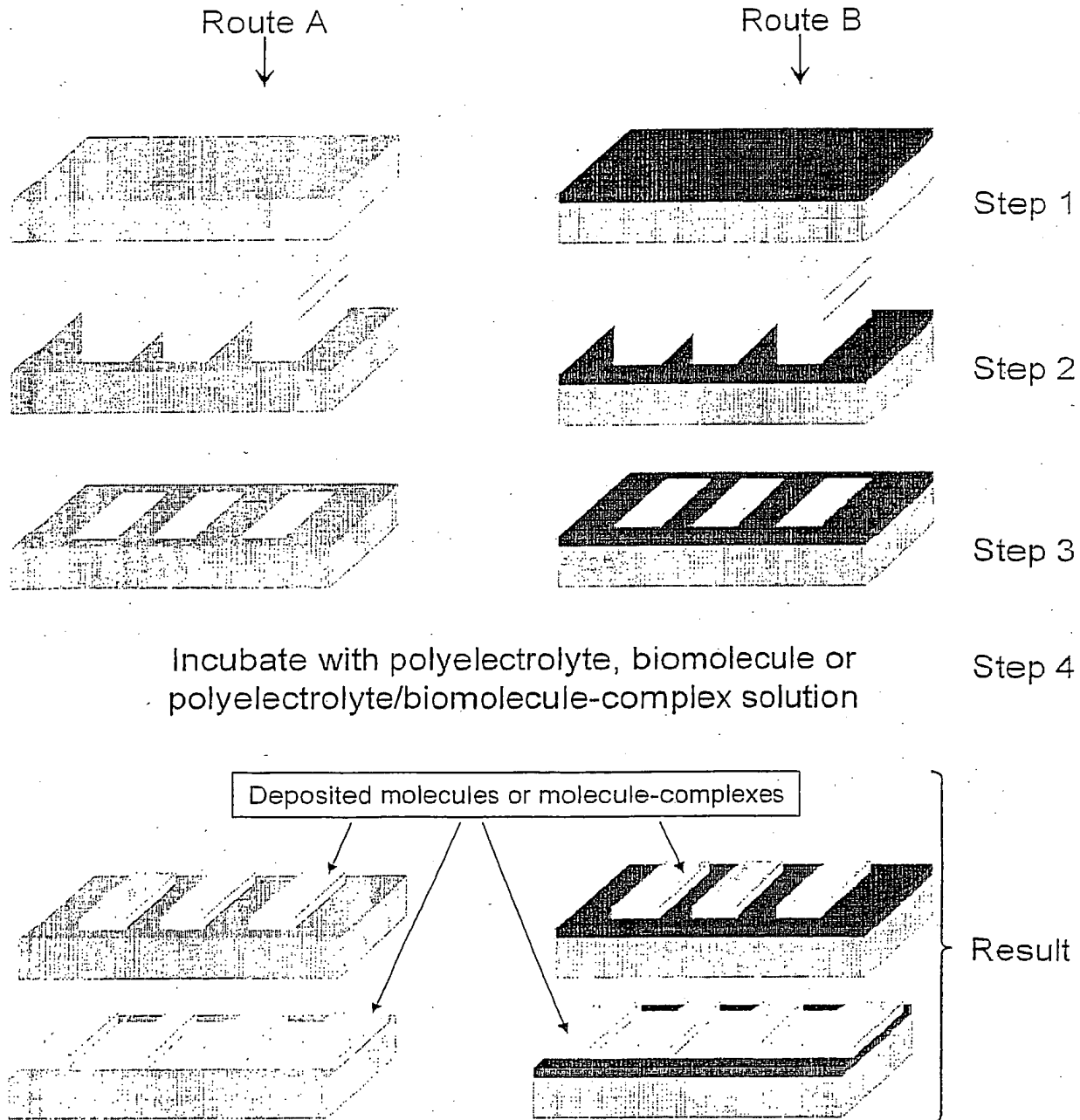


Fig. 1

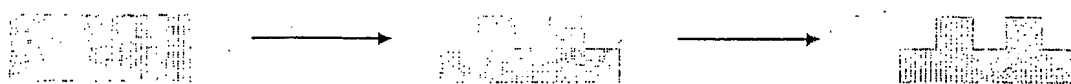
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A:  $\mu$ CP – micro Contact Printing



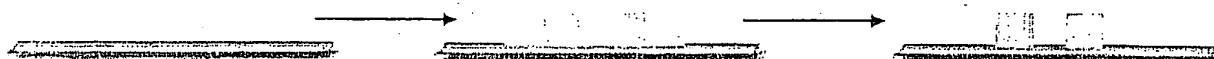
B: REM – Replica Molding



C:  $\mu$ TM – micro Transfer Molding



D: MIMIC – Micro Molding in Capillaries



E: SAMIM – Solvent Assisted Micro Molding



Fig. 2

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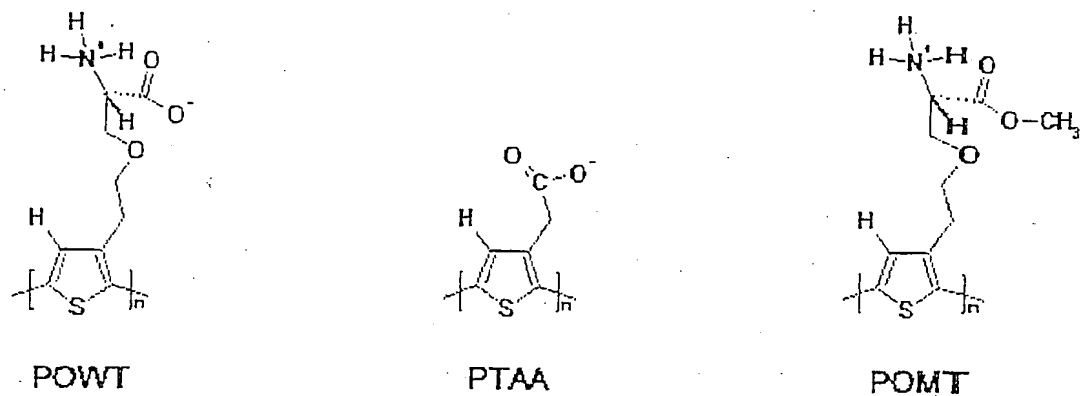


Fig. 3

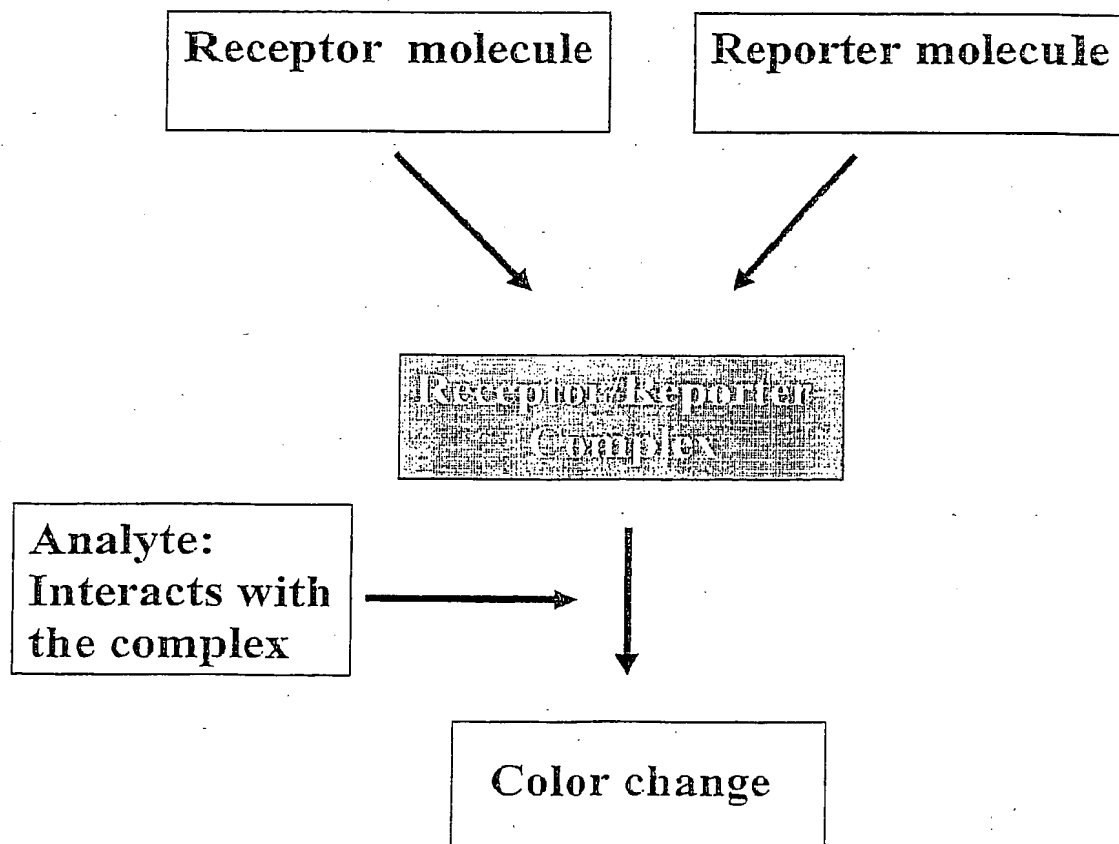


Fig. 4

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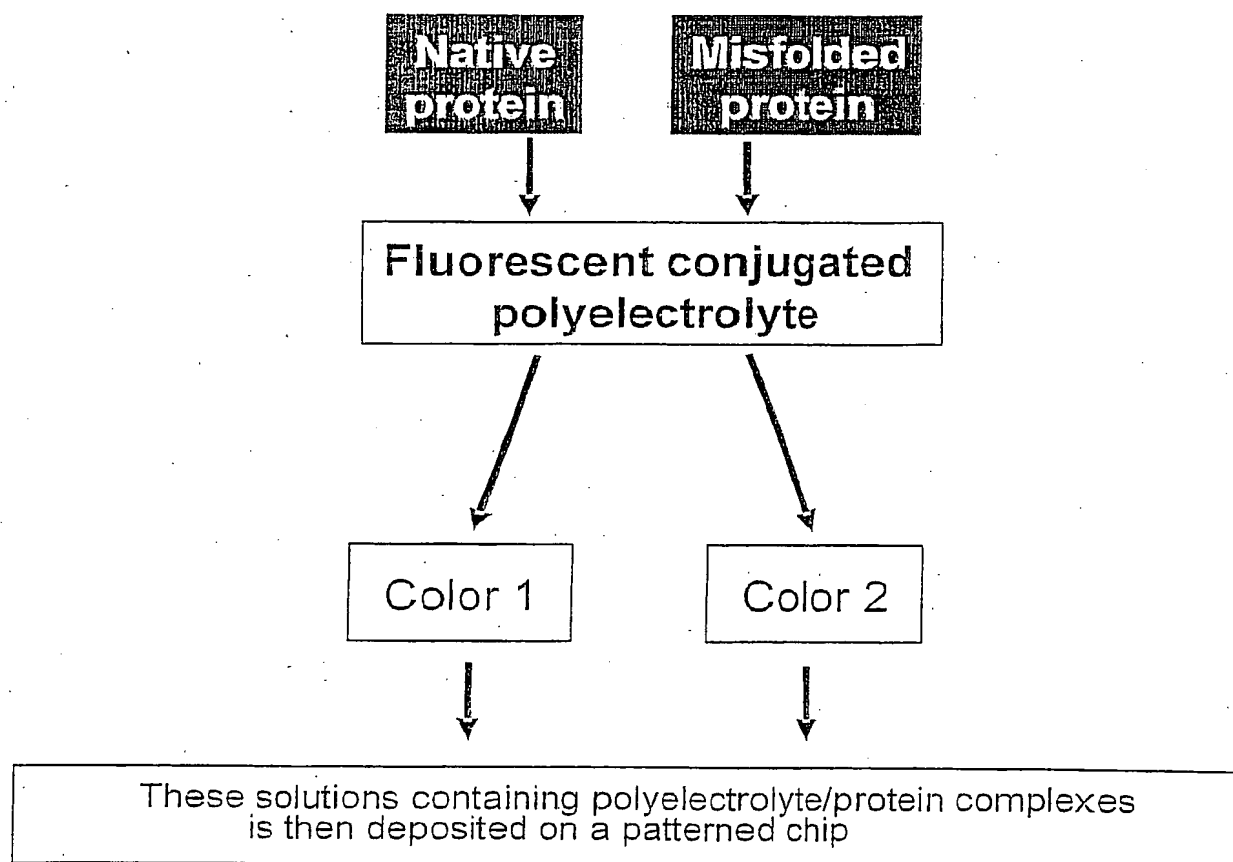
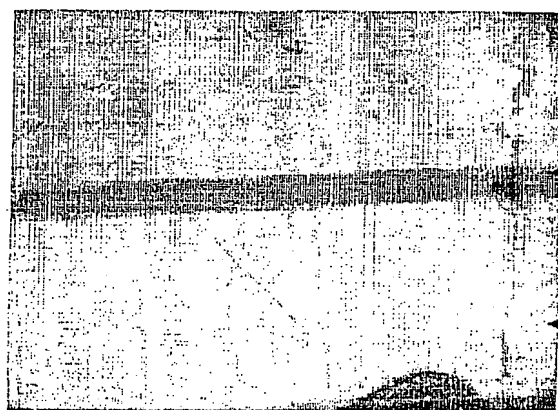


Fig. 5

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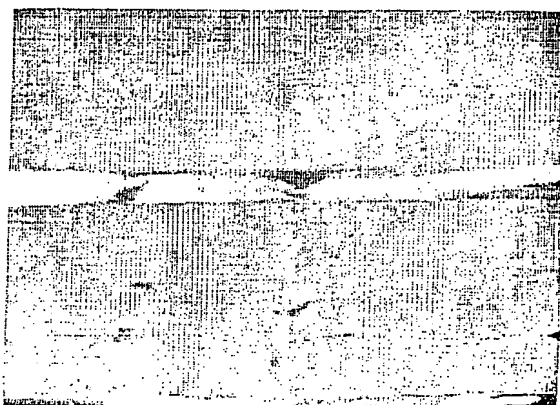
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POWT was dissolved in pure water

**Hydrophilic area:**  
POWT in pure water solution  
does not stain this area

**Hydrophobic area:**  
POWT in water solution stains  
this area only



POWT was dissolved in 20% water/80% methanol

**Hydrophilic area:**  
POWT in water(20%) / methanol (80%)  
solution stains this area in red

**Hydrophobic area:**  
POWT in water(20%) / methanol (80%)  
solution stains this area in green

Fig. 6

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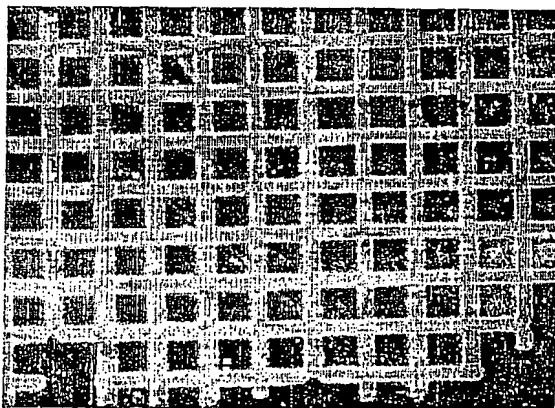
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**Hydrophilic area:**  
POWT/ssDNA complex in phosphate buffer solution stains this area

**Hydrophobic area:**  
POWT/ssDNA complex in phosphate buffer solution does not stain this area particularly good

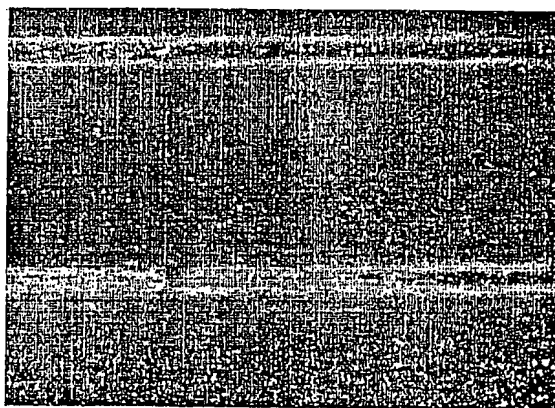
Pattern obtained from POWT/ssDNA-complex dissolved in phosphate buffer.



Same as above but with a different hydrophobic pattern on the hydrophilic substrate.

The squares are hydrophobic and the surrounding area is hydrophilic.

Pattern obtained from POWT/ssDNA-complex dissolved in phosphate buffer.



**Hydrophilic area:**  
POWT/dsDNA complex in phosphate buffer solution stains this area

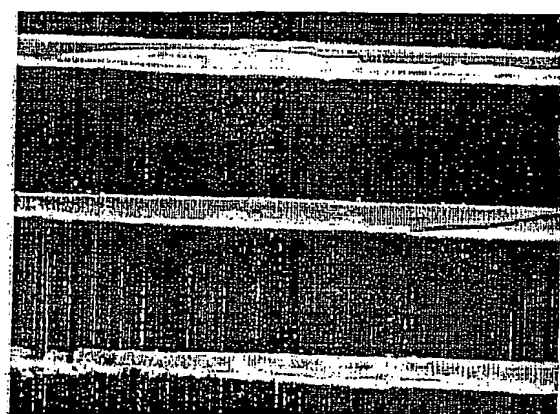
**Hydrophobic area:**  
POWT/dsDNA complex in phosphate buffer solution does not stain this area particularly good

Pattern obtained from POWT/dsDNA-complex dissolved in phosphate buffer.

Fig. 7

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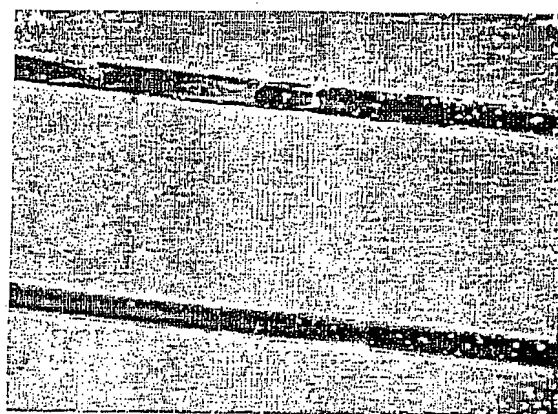


**Hydrophilic area:**

POWT/poly-Glutamic acid complex in phosphate buffer solution stains this area

**Hydrophobic area:**

POWT/poly-Glutamic acid complex in phosphate buffer solution does not stain this area



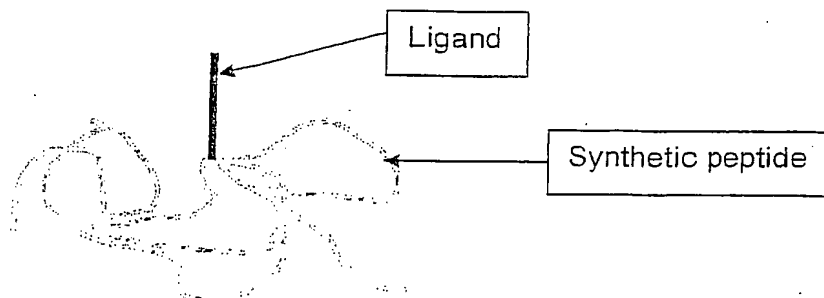
**Hydrophilic area:**

POWT/poly-Lysine complex in phosphate buffer solution stains this area

**Hydrophobic area:**

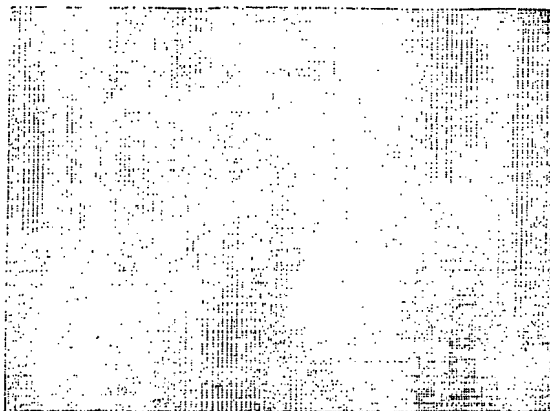
POWT/poly-Lysine complex in phosphate buffer solution does not stain this area

**Fig. 8**



These two examples of synthetic peptides can be synthesized with ligands that can bind to a biomolecule of choice.

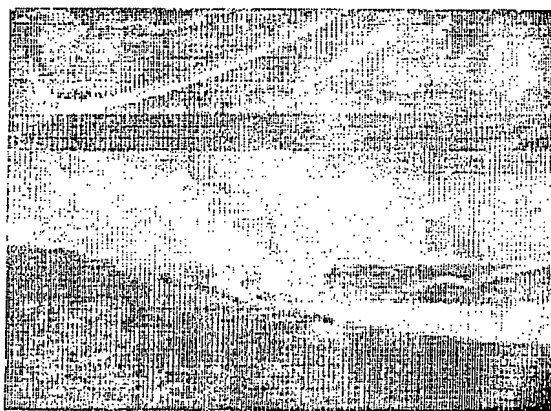
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**Route B:**

POWT in pure water was coated on a clean substrate and then modified with PDMS stamp with a relief structure.

The modified areas that the patterned stamp creates cannot be seen before incubation with a molecule that binds to either area.



**Modified area:**

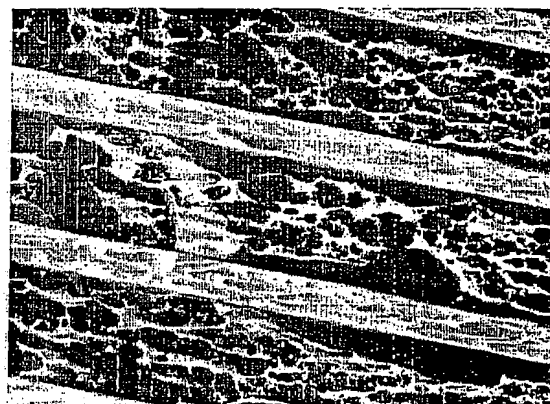
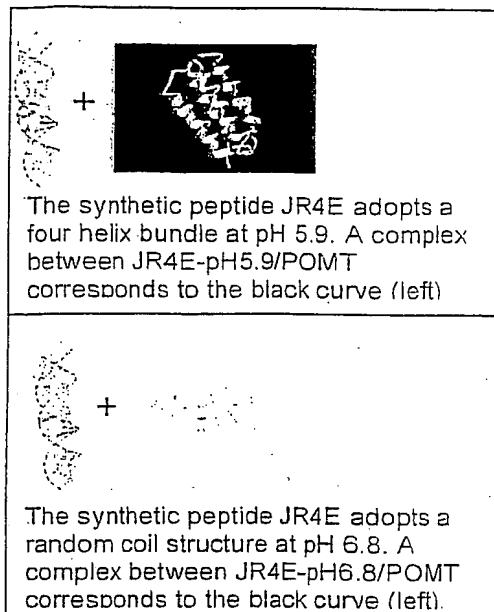
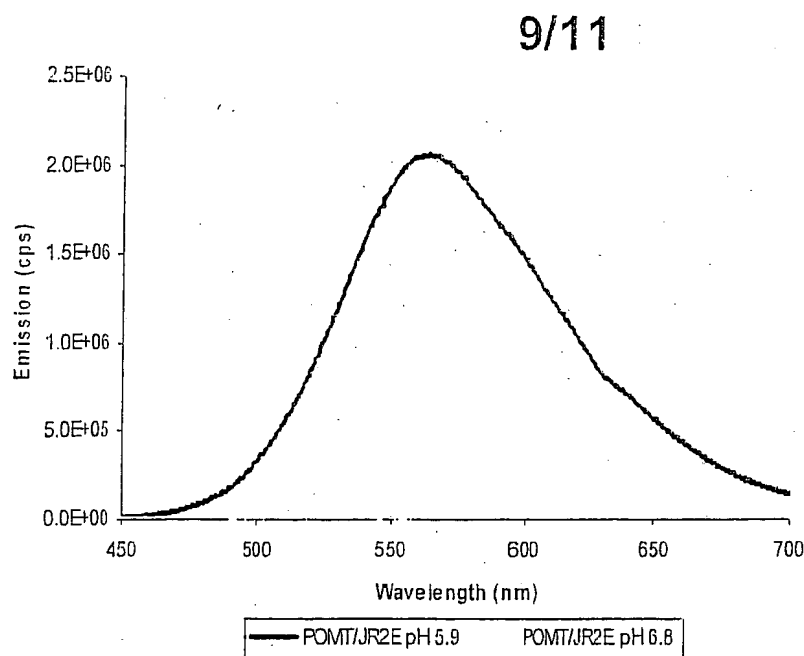
ssDNA in phosphate buffer binds to the modified area

**Unmodified area:**

ssDNA in phosphate buffer does not bind to the this area

**Fig. 9**



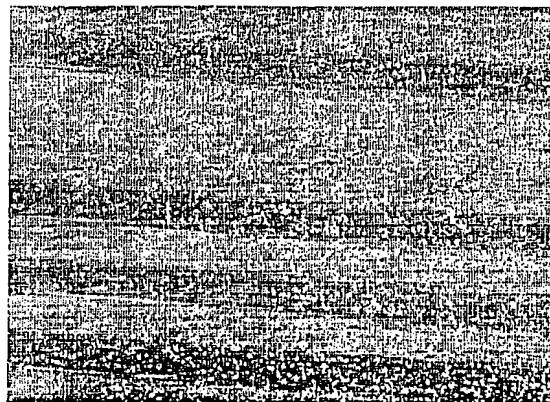


**Hydrophobic area:**

POMT/JR4E-pH5.9 complex in phosphate buffer solution does not stain this area

**Hydrophilic area:**

POMT/JR4E-pH5.9 complex in phosphate buffer solution stains this area in green color



**Hydrophobic area:**

POMT/JR4E-pH6.8 complex in phosphate buffer solution stains this area in orange color

**Hydrophilic area:**

POMT/JR4E-pH6.8 complex in phosphate buffer solution does not stain this area

Fig. 10

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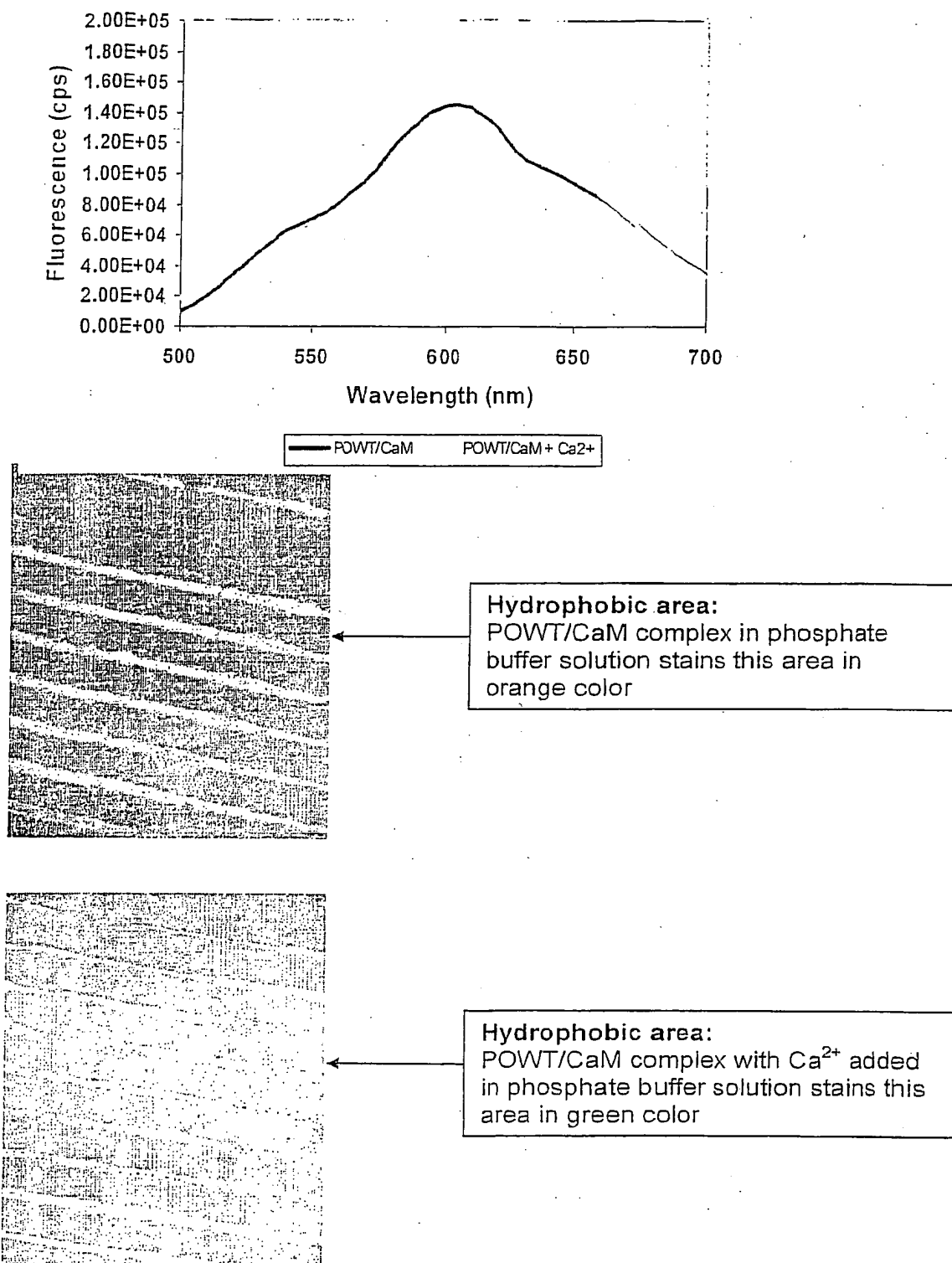
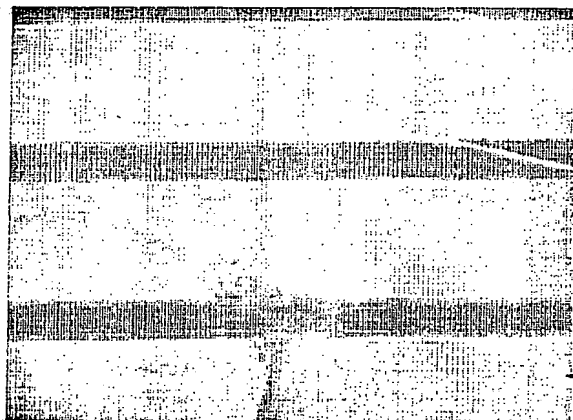


Fig. 11

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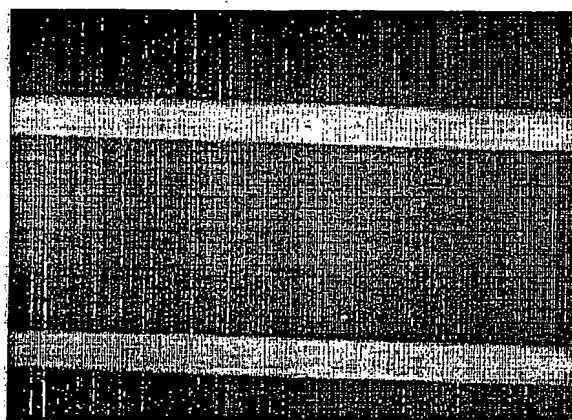


**Hydrophilic area:**

PTAA/Insulin complex in phosphate buffer solution does not stain this area.

**Hydrophobic area:**

PTAA/Insulin complex in phosphate buffer solution stains this area.



**Hydrophilic area:**

POMT/Insulin complex in phosphate buffer solution stains this area.

**Hydrophobic area:**

POMT/Insulin complex in phosphate buffer solution does not stain this area.

Fig. 12

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